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ANNUAL WATER-WASTEWATER SCHOOL EDITION

Big Sky CLEARWATER

OCTOBER, 1975

VOL. V

NO. 3

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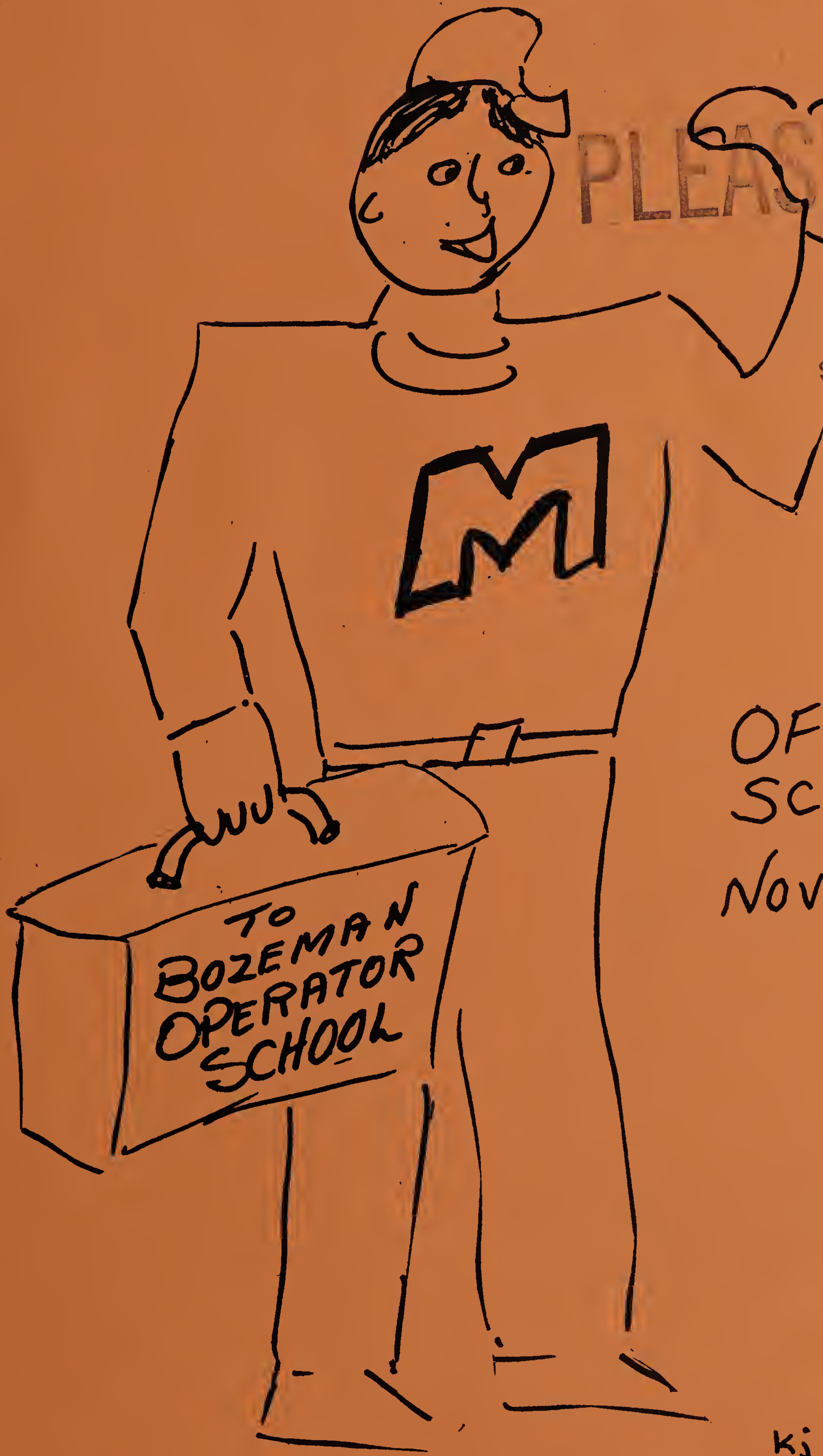

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42ND ANNUAL
WATER/WASTEWATER OPERATORS SCHOOL

The annual short course for water and wastewater operators is to be held at MSU during the week of November 17 through 21.

The program this year holds promise of being one of the best ever presented, with Dr. Earnest Gloyna, Dean of Engineering at the University of Texas as the featured speaker. In a nutshell, here are the features that you can expect at the school this year.

- The Importance of Public Relations
- The Montana Operators Certification Law and what is happening nationally in operator certification
- A simplified version of water chemistry for those of you who have no technical background
- All-afternoon sessions of how-to-do-it in laboratory testing for the operator who wants to do his own test work
- A mathematics lesson in how to solve problems
- Water bacteriology for both newcomers and the old-timers
- A session on the higher forms of micro life in water
- A "show and tell" room where tape, slide and movies will be run on a wide variety of subjects of interest to you
- Laboratory techniques for those who do their own coliform and fecal coliform testing. Interesting even if you don't.
- Elementary hydraulics - an explanation of why liquids behave like they do
- The principles of sewage treatment. A general view of the methods used. For people new to the field.
- Water treatment and wastewater treatment workshops where we can divide into smaller groups and discuss details.
- Evening work sessions for extra help to those who have trouble with working mathematics
- Distribution systems - operation and maintenance
- Sewage collection systems - operation and maintenance
- An update of the MPDES discharge permit system
- The new Federal Safe Drinking Water Act
- Cross Connections
- How to set up and operate a safety program
- Water meter maintenance and testing
- Land disposal of sewage and sewage sludges
- Disinfection procedures for your distribution system
- The lagoon as a sewage treatment plant
- Upgrading lagoons with rock and sand filters
- Upgrading lagoons with aeration. A variety of speakers.
- Industrial wastewater treatment methods and processes
- How to operate and maintain water wells
- Tours and demonstrations of secondary treatment at the Bozeman wastewater treatment plant

Make your plans now to attend the annual Bozeman school. The registration is still $35 for the full five days. We have a staff of experts in their fields to help you whether you are a newcomer to the water and wastewater business or an old-timer. The bull sessions during coffee breaks are worth the price of admission.

The short course is not intended to be a crash course for the certification tests, but attendance will help. Manuals for the school are not mandatory, but we recommend that you obtain the New York Manual for Water Treatment, or New York Manual for Sewage Treatment and the corresponding Revised Idaho Manual from Mrs. Bettie Erickson, Board of Certification for Water and Wastewater Operators, State Department of Health and Environmental Sciences, Helena, Montana 59601. The New York books are $1.75 each and the Idaho study guide is $2 each.

The Board of Certification for Water and Wastewater Operators will give certification tests on Saturday morning, November 22, for those who wish to become certified.

YOU GET WHAT YOU PAY FOR

By A. W. Clarkson

Russell Train, Administrator of EPA has said with the implementation of the "Safe Drinking Water Act" the water utilities and the public will be expected to pay more for water. The philosophy of EPA is that the cost of capital improvements, surveillance and monitoring the Safe Water program will be borne by the users.

For too long, the water industry has stressed the fact that water is "cheaper than dirt". Anyone who has bought a ton of topsoil is sure to realize this. Waterworks people are proud of the dedication of workers who devote long hours for low pay in order to provide the public with the best, purest and most reliable water supplies in the world. But should the waterworks personnel be considered as second class citizens when it comes to pay and stature as compared to other city employees or those of comparable investor owned utilities?

Many places are now finding out it is difficult to retain competent employees or attract new personnel for the water supply system at the salaries they are offering. Water for human consumption is a manufactured product and not free as some people are led to believe. Anyone who desires free water had better resort to packing it from the stream in a bucket and figure the cost in time spent in collecting the water and money spent for doctor bills to combat any illness he may contract by drinking unsafe water.

The American Water Works Association has recommended to all utilities five steps for obtaining and keeping qualified people.

1. A study to determine if waterworks salaries are competitive with those of other city employees or persons working in comparable jobs for other utilities (gas, telephone, electric).

2. Increased educational standards for the position and encouragement of additional training by attending short schools or completing correspondence courses.

3. Set requirements that utility managers for small communities have at least a high school education and that managers be college graduates for those with complete treatment plants or serving 25,000 persons.

4. Utilities serving over 10,000 population should employ a full-time registered professional engineer.

5. Keep proper accounting methods to permit intelligent administration of employer benefit policies.

All utilities have a responsibility to their customers to provide the best quality water possible at all times in sufficient quantity and at adequate pressure. If in order to provide this service, it is necessary to increase the water rates, then the rates must be raised.

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CONGRATULATIONS

Of great interest and a source of pride to all MWPCA members in particular and our industry in general is the news that our association director, John Spindler, has been nominated to serve on the WPCF executive committee.

It seems likely that this selection was made for two basic reasons. First because of John's known ability and dedication and secondly the obvious fact that our association is interested and concerned in federation activities.

This is a singular honor for John and our association and should result in even more interest and activity from our membership. Let us move in behind John, members and officers all, support him to the best of our ability in helping him meet this challenging opportunity.

AWWA STANDARDS ARE APPROVED FOR PVC PIPE AND FOR METERS

MINNEAPOLIS, June 8 - The board of directors of the American Water Works Association approved two new and two revised standards here today. New standards are for PVC pipe and multi-jet meters.

The new PVC standard, C900-75, is for 4-inch through 12-inch pipe. It includes pressure ratings, outside diameters, wall thicknesses and testing procedures; everything needed for preparing purchase specifications.

AWWA said it expects to have the PVC standard ready for publication in early September.

The new standard on multi-jet meters for customer services, C708-75, covers 5/8-inch through 2-inch sizes. These are velocity-type devices, as opposed to displacement type meters for which AWWA standards have long been available. This standard is expected to be available in October.

Revisions approved by the board today were for field welding and wet-barrel hydrant standards.

AWWA Standard C206-75 is a general updating of the existing standard for field welding of steel water pipe joints. The revised version includes a more comprehensive section on welding procedures, the Association said.

Standard C503-75 provides for the barrels of wet-barrel fire hydrants to be made of ductile iron, steel and brass or bronze, as well as cast iron, which was the only material approved in the past.

Both revised standards are expected to be available in October or early November.

AWWA met here June 8-13 for its 95th Annual Conference.

FROM: Bob Spangler, Director of Public Information, AWWA

AWWA BUILDING FUND COMPLETE

The Building Fund Drive is "officially" over. The final figure is still to be determined since contributions are continuing to come in from dedicated sections aiming to meet their goal of 100 percent.

I want to thank everybody--and I do mean everybody--who in any way contributed to the successful completion of the Building For Progress Drive. AWWA has a facility second to none; it is a headquarters of which every member of the Association can be proud. If you haven't visited there, be sure to do so whenever you are in Denver.

A concentrated effort now is needed to generate complete fulfillment of pledges. Notices are being sent to encourage payment of these pledges. If there are any delinquent pledges in your sections, give them prompt attention.

Again, thanks to everyone for their support of the building fund drive, especially the Building For Progress Committee members who gave countless hours to the effort, and particularly to those sections which went the full distance to achieving 100 percent or more of their goal.

A summary of contributor categories as of August 1:

Source	Goal	Contributions & pledges	Percent of Goal
Sections	325,000	358,378	110
Associate	150,000	156,096	104
Consultant	75,000	26,875	36
WWEMA	30,000	50,000	167
	580,000	591,349	
Interest		5,270	
		596,619	

FROM: Mike Davoust, AWWA

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Isn't it strange that so many smart people work for such dumb bosses!

AWWA-WPCA COMMITTEES TO REPORT

Are you a member or a chairman of one of the AWWA, WPCA or Joint Committees? Have you taken any action on your committee's responsibilities? Do you plan to?

The President of WPCA and Chairman of AWWA Section outlined a program for your committee early this year. Some were to report to them by June 30 on their activities (did you?) and most are to make a report of activities for the annual Board meeting which will take place November 19 in Bozeman. If you have some committee business that should be in progress - get started! You may not be able to have a direct meeting, but the U. S. mails run every day. Write your committee membership and get their input. Finally, send a report to your Association President or Section Chairman before November 14. If you are to be at the Board meeting in Bozeman, then bring it in person. Even if you goof off and don't do anything, let them know!

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HAROLD SWANSON

It is with deep regret that we must announce the passing of Harold Swanson, operator of the wastewater and water facilities at Galen State Hospital. Harold died suddenly of a heart attack while at work on July 28, 1975. Harold was 53.

Harold Swanson was well known among Montana treatment plant operators. His plant at Galen was a model of clean, efficient operation. His helpful and friendly attitude made many friends around the state. Harold regularly attended the annual Water/Wastewater Operators school at Bozeman and other professional functions. There are few treatment plant operators with the self-taught technical proficiencies that Harold demonstrated. We shall all miss Harold.

The Galen facilities are now being operated by Tom Earhart.

MULTI-JET METER STANDARD STALLED

DENVER - Publication of a new American Water Works standard on multi-jet meters has been "delayed until further notice."

AWWA has announced receipt of a formal appeal of its Standards Council's approval of Multi-Jet Meter Standard C708-75, which was confirmed by the Association's board of directors in Minneapolis June 8.

The appeal was filed by Neptune Water Meter Company of Tallassee, Alabama in a letter dated June 23 from Chief Engineer D. J. Kullman to the chairman of the AWWA Standards Council.

Under AWWA procedures, all activity toward production of the new standard has ceased pending outcome of the appeal. The Association said it could not estimate how long that might take.

FROM: Robert Spangler, Director of
Public Information, AWWA

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PROPOSED CHANGES IN SECONDARY TREATMENT REQUIREMENTS

The Federal Environmental Protection Agency has proposed an amendment to their secondary treatment requirements which would change limitations on fecal coliforms and pH. The present standards in the case of most of the facilities treating domestic waste necessitates the use of a separate nonbiological unit process designed specifically for the disinfection of wastewater. The only wastewater disinfection processes currently available for widespread use of publicly owned treatment works are those employing chlorine. The minimum level of disinfection for all sanitary wastewater discharges is of questionable benefit in instances where the possibility of human contact with the receiving body is remote. Evidence exists that residual chlorine formed as a result of chlorination in domestic wastewater can be toxic to aquatic life in relative low concentrations. It is EPA's intent through the proposed amended regulations to assess advantages and disadvantages of the use of chlorine on a case-by-case basis and not have a specific coliform limit to cover all sewage discharges. The actual discharge limitation would in large part be determined by instream water quality criteria that has been adopted by the state.

Existing EPA secondary treatment requirements require that pH shall remain within the limits of 6.0 to 9.0 for all discharges. It is the intent of the new proposed regulations to control the effluent discharge from treatment works which add inorganic chemicals as part of the treatment process or where the effluent pH falls outside the 6 to 9 range because of contributions from industrial sources. The proposed effluent pH limitations are not intended to require pH adjustments of effluents in strictly physical/biological treatment processes. As most of you know that have been monitoring sewage lagoon effluents, pH is highly variable throughout the day. This is due to the algae which is present. Many of you have had difficulty with the effluent being higher than 9.0. This would take care of your problem.

Regarding the coliform bacteria, you have probably also found that this varies considerably throughout the year with high coliforms being found in the winter discharge and a low coliform content with the warm weather discharge. It is our belief that there will be very few sewage lagoon discharges that will need to be chlorinated if the proposed regulations become effective as presently proposed.

The states are working with the Environmental Protection Agency in trying to develop more realistic BOD and suspended solids requirements for the small installations, particularly in those cases where they are discharged to a high volume of streamflow. At this time, no formal proposals of this nature have been written by EPA nor do we know if EPA will actually accept the changes being recommended by the states.

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"Tell me, Mr. Jones," asked the psychiatrist, "do you cheat on your wife?"

"Who else?" replied Jones.

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STORM SEWER DISCHARGES

In a recent court decision, EPA is required to propose regulations which will bring storm sewer discharges, all feedlots with a potential discharge, irrigation return flows and certain forestry drainage practices, under the National Pollutant Discharge Elimination System program. Just how this will be handled, no one seems to know at this time as this will place a gigantic load on enforcement agencies if each discharge is individually permitted. If all storm sewer discharges were to put in some treatment mechanism, over 200 billion dollars nationwide is the estimated cost. It is unrealistic to expect that all storm sewer discharges will be treated. It is much more realistic to expect that the emphasis will be placed on best management practices of land being drained into storm sewers. Actual treatment may be required where the discharged water is to high quality streams. The Water Quality Bureau during the year will be contacting some of the municipalities to try and obtain an estimation of the magnitude of the storm drainage problems in the state.

We will keep you informed as best as we can on what is developed by EPA. It would be advisable for all of you that have responsibilities for storm drainage within your community to have a look at what is occurring in your community during a heavy runoff.

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The trouble with being a leader today is that you can't be sure that people are following you instead of chasing you.

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TRAILER PARK AND CAMPGROUND OPERATOR TRAINING SEMINARS

Although the operator of a mobile home park or a seasonal campground may have a small water system and a small sewage system, his sanitary requirements are equal to the city system and his hazards in maintaining that level of sanitation are usually much higher. With that in mind, the State Department of Health and Environmental Sciences and the Board of Certification for Water and Wastewater Operators is cooperating to present a series of one-day seminar type training sessions for these operators.

The first of these training seminars was held on June 15 at the Ramada Inn in Bozeman. The turnout for the program was good, with 40 people from Gallatin and Park counties participating. At completion of the day-long session, Mrs. Bettie Erickson, Office Manager for the Certification Board, gave Class IV and V certification tests to the group. Ken Johnston of the Water Quality Bureau led the training, and Larry Wallace and Emery Nelson, Gallatin County Sanitarians, participated.

The second of the series was held at the Outlaw Inn in Kalispell on September 19. An excellent attendance was recorded with 50 operators from small systems in Flathead, Lake and Lincoln counties taking part in the program. Will Aikin of the Kalispell Water Quality office did a fine job of presenting regulations affecting these small operations and on the subject of on-site sewage disposal. At the conclusion of the day, Mrs. Bettie Erickson gave certification tests for Class IV and V non-municipal operators.

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OPERATOR MEETINGS AT LAUREL, KALISPELL, GLENDIVE AND WOLF POINT

A continuation of the seminar type operator meetings

The seminar type of meeting for operators is being continued with meetings at Laurel on July 10 and at Kalispell on September 18. Ken Beven laid the ground work for the Laurel meeting. The session was held at the Laurel Masonic Hall with a short walk to the downtown Owl Cafe for lunch. A good representation from most of the communities and cities in the south central section of the state was there although July is a difficult month for many operators to take a day off.

At Kalispell the local arrangements were made by Brian Orndorff and Joe Longpre. The meeting was held at the Outlaw Inn with a dandy turnout of 54 registered. The program at both locations was essentially the same. Mayor Louie Yovetich welcomed the group to Laurel, and at Kalispell Mayor Norma Happ gave a brief welcome to the Flathead Valley. An update on the status of how the MPDES permit system is operating was presented by Kevin Keenan. The Safe Drinking Water Act of 1975 was reviewed by Art Clarkson of the Water Quality Bureau. At Laurel, Wayne Young, Chairman of the Certification Board, gave an outline of the certification proposals of the National Association of Boards of Certification for Water and Wastewater Operators. At Kalispell, Ken Johnston substituted for Wayne on this subject. A discussion of disinfection procedures by water system operators, a review of cross connections and their hazards and a slide presentation of trenching safety and OSHA requirements completed the program.

The next meetings were held in Glendive (in the Courthouse Community Room on October 8) and in Wolf Point (at the Sherman Motor Inn on October 9). 21 persons from Sidney, Glendive, Miles City, Fairview and Baker attended the meeting in Glendive. Mayor L. C. Allen attended and gave the welcome with local arrangements made by Harold Auker and Bob Knapp.

Dr. C. R. Grow (a councilman of the city of Wolf Point) attended the meeting in Wolf Point, and local arrangements were made by Charles Worley, Director of Public Works. 20 people from Glasgow, Fort Peck, Saco, Nashua, Scobey, Culbertson, Poplar, and Wolf Point were in attendance at this meeting.

BOARD OF WATER AND WASTE WATER OPERATORS

Following is the notice of proposed adoption of rules and the proposed rules for operator certification. The proposed rules are printed in their entirety as it is believed they will be of interest to many of the readers of "Big Sky Clearwater."

BEFORE THE BOARD OF WATER AND WASTEWATER OPERATORS
OF THE STATE OF MONTANA

In the matter of the	) NOTICE OF PROPOSED
adoption of rules MAC	) ADOPTION OF RULES
16-3.34(6)-S3420, 16-3.34	) MAC 16-3.34(6)-S3420,
(6)-S3430, 16-3.34(6)-	) 16-3.34(6)-S3430,
S3440 and 16-3.34(6)-	) 16-3.34(6)-S3440 and
S3450 relating to water and	) 16-3.34(6)-S3450
waste water plants and	) (Water and Waste Water
operators	) Plants and Operators)
	NO PUBLIC HEARING
	CONTEMPLATED

TO: All Interested Persons

1. On November 13, 1975, the Board of Water and Waste Water Operators (Board) proposes to adopt rules MAC 16-3.34(6)-S3420, 16-3.34(6)-S3430, 16-3.34(6)-S3440 and 16-3.34(6)-S3450 relating to water and waste water plants and operators.

2. The proposed adoption of these rules shall codify the rules and regulations adopted by the Board on April 5, 1972 and subsequent amendments thereto, which have not been adopted by the Board pursuant to the Montana Administrative Procedures Act. The proposed adoption of the rules does not modify the procedures or criteria currently used by the Board for classification of plants and certification of operators established by the Board's rules.

3. Summaries of the proposed rules follow; A complete copy of the proposed rules may be obtained by contacting the Board of Water and Waste Water Operators, Capitol Post Office, Helena, Montana, 59601.

Rule MAC 16-3.34(6)-S3420 defines ground water, primary sewage treatment, responsible charge, secondary waste water treatment and surface waters.

Rule MAC 16-3.34(6)-S3430 sets forth classification of water treatment plants, water distribution systems and waste water treatment plants according to population served and type of treatment.

Rule MAC 16-3.34(6)-S3440 provides for certification of operators under the grandfather clause in Section 69-5906, R.C.M. 1947, temporary certificates and renewal of certificates.

Rule MAC 16-3.34(6)-S3450 establishes the procedure for examinations for certification of water and waste water plant operators.

4. Interested parties may submit their data, views or arguments concerning the proposed rules in writing to: Board of Water and Waste Water Operators, Capitol Post Office, Helena, Montana, 59601. Written comments in order to be considered by the Board must be received no later than November 12, 1975.

5. If a person directly affected wishes to express his data, views or arguments orally or in writing at a public hearing, he must make written request for a public hearing and submit this request along with any written comments he has to: Board of Water and Waste Water Operators, Capitol Post Office, Helena, Montana 59601.

6. If the Board receives requests for a public hearing on the proposed rules by more than ten percent (10%) or twenty-five (25) or more persons di-

rectly affected, a public hearing will be held at a later date. Notification of parties will be made by publication in the Administrative Register.

7. The authority of the Board to make the proposed rules is based on Section 69-5910, R.C.M. 1947.

WAYNE YOUNG, CHAIRMAN

Certified to the Secretary of State October 15, 1975

MAC Notice No. 16-3-34-1

16-3.34(1)-03400 Sub-Title 3

CHAPTER 34

BOARD OF WATER AND WASTE WATER OPERATORS

Sub-Chapter 1

Board Organization

Section 16-3.34(1)-03400 Board Organization

Sub-Chapter 2

Procedural Rules

Section 16-3.34(2)-P3410 Procedural Rules

Sub-Chapter 6

Water and Waste Water Plants and Operators

Section 16-3.34(6)-S3420 Definitions
16-3.34(6)-S3430 Classification of Plants
16-3.34(6)-S3440 Certification of Operators
16-3.34(6)-S3450 Examinations

Sub-Chapter 1

Board Organization

16-3.34(1)-03400 BOARD ORGANIZATION (1) The Board of Water and Waste Water Operators is described in MAC 16-2.1-0100 of this code. (History: Section 82-4203, R.C.M. 1947; NEW MAC Not. No. 16-3-34-2; Order MAC No. 16-3-34-2; Adp. 11/13/75; Eff. 12/5/75.)

Sub-Chapter 2

Procedural Rules

16-3.34(2)-P3410 PROCEDURAL RULES (1) The Board of Water and Waste Water Operators adopts the procedural rules as stated in MAC 16-2.2(1)-P200 of this code. (History: Sec. 82-4203, R.C.M. 1947; NEW MAC Not. No. 16-3-34-2; Order MAC No. 16-3-34-2; Adp. 11/13/75; Eff. 12/5/75.

Sub-Chapter 6

Water and Waste Water Plants and Operators

16-3.34(6)-S3420 DEFINITIONS (1) In addition to the terms defined in Section 69-5902, R.C.M. 1947,

(a) "Ground water" means subsurface water occupying the saturation zone from which wells and springs are fed. In a strict sense the term applies only to water below the water table.

(b) "Primary sewage treatment" means the first major (sometimes the only) treatment in waste water treatment works, usually sedimentation. The removal of a substantial amount of suspended matter with little or no removal of colloids and dissolved matter. The treatment may be accomplished by lagoons, septic tanks, or sedimentation basins either with or without mechanical sludge removal mechanisms.

(c) "Responsible charge" means responsible for the day-by-day supervision of a waterworks, waste water works, or any part thereof, which may affect the performance of the works or which may affect the quality of the water for human consumption or the quality of the effluent produced by such works. Operator in "responsible charge" shall be available or immediately available at all times.

(d) "Secondary waste water treatment" means the stabilization of wastewater by biological or chemical processes after primary treatment by sedimentation. The treatment may be accomplished by trickling filters, activated sludge, intermittent sand filters, bio-disc, stabilization lagoons, or sorption (usually by activated carbon).

(e) "Surface waters" means all water on the surface as distinguished from subterranean water. (History: Sec. 69-5910, R.C.M. 1947; NEW MAC Not. No. 16-3-34-1; Order MAC No. 16-3-34-2; Adp. 11/13/75; Eff. 12/5/75.)

16-3.34(6)-S3430 CLASSIFICATION OF PLANTS (1) All water treatment plants, water distribution systems, and waste water treatment plants shall be classified according to population served and type of treatment as shown in the chart entitled "Certification Classes", copy of which follows this rule and by this reference is made a part hereof.

(2) Exceptions:

(a) When a single industry obtains water from a certified source, it is not necessary for that industry to have a certified operator; however, if a subdivision or municipality purchases its water from a certified source, that person in charge of the distribution system must be certified.

(b) The person in charge of the water or waste water for a school building does not have to be certified since the law requires a certified operator in charge when ten or more families are served, not ten or more persons. The same would apply to missile sites. (History: Sec. 69-5910, R.C.M. 1947; NEW MAC Not. No. 16-3-34-1; Order MAC No. 16-3-34-2; Adp. 11/13/75; Eff. 12/5/75.)

(refer to diagram on next page)

16-3.34(6)-S3440 CERTIFICATION OF OPERATORS

(1) Certification will be granted to applicants under the grandfather clause providing they submit a statement from the governing board or owner of a water treatment, water distribution, or waste water treatment plant stating they were in a position of responsible charge of the facility on July 1, 1967. The annual fee must be paid retroactive to the above date.

(2) If an addition to an existing facility is installed after July 1, 1967, the person who was in responsible charge of the plant on that date and has a grandfather clause certificate, may be granted a grandfather clause certificate at a higher classification, providing he participated in the installation, and providing that evidence be presented to the Board that the operator has been trained to operate the higher-classified plant.

(3) If an operator moves out of the state, he may renew his certificate for a period of two years. He then must furnish proof to the Board that he is still employed in the water or waste water field.

(4) Upon receipt of an application and on approval of the application by the department, temporary certificates may be issued to extend only to the date of the next examination at which time the holder of a temporary certificate is required to take the examination or furnish to the Board a reasonable excuse for not being present. Continuance

CERTIFICATION CLASSES

		1	2	3	4	5
WATER PLANT OPERATORS	Surface* Ground	Over 2,500 Over 20,000	500-2,500 2,500-20,000	100-500 500-2,500	less than 100 100-500	- - - - - - - less than 100
WATER DISTRIBUTION OPERATORS	*	Over 20,000	2,500-20,000	500-2,500	100-500	less than 100
WASTE WATER PLANT OPERATORS	Primary * Secondary	Over 20,000 Over 2,500	2,500-20,000 500-2,500	500-2,500 100-500	100-500 less than 100	less than 100 - - - - - - -
FEE (1 year)		$20	$15	$10	$5	$3

*According to population served.
(See definitions for surface, ground, primary, secondary)

of the certificate shall be at the discretion of the Board.

(5) Where a plant has a qualified operator in responsible charge of a Class 1 or Class 2 facility, any other employee may be granted a certificate by examination at a lower classification.

(6) In any case where the census shows a city is changed to a higher classification, the operators of the appropriate system shall take and pass the examination for the higher classification with the exception of operators holding a certificate under the grandfather clause.

(7) Certificates shall be renewed each year after payment of the proper fee. (History: Sec. 69-5910, R.C.M. 1947; NEW MAC Not. No. 16-3-34-1; Order MAC No. 16-3-34-2; Adp. 11/13/75; Eff. 12/5/75.)

16-3.34(6)-S3450 EXAMINATIONS (1) A person desiring to take the examination for certification as a water or waste water treatment plant operator must complete the application form and return it to the Board fifteen (15) days before the date of the next examination. The proper fee must accompany the application. Upon approval of the Board, the applicant may take the examination.

(2) An operator who is already certified and desires to take an examination for a higher certification level shall submit fees in an amount sufficient to cover the difference between his present fee and the fee for the certification level for which he desires examination. If he fails, the amount paid is forfeited.

(3) An operator certified under one classification by examination and another under the grandfather clause will receive one certificate with that classification held under the grandfather clause noted by "(g.c.)".

(4) Two examinations for all classifications shall be given each year.

(5) Class 4 and Class 5 examinations may be given by a member of the staff of the Environmental Sciences Division of the State Department of Health or a member of the Board at a time and place set by the person administering the examination.

(6) All persons indicating a desire to take the examination will be sent a notice of the time and place at least two weeks prior to the examination date.

(7) Special examinations may be held in the event that the examination date and place regularly set by the Board conflicts with religious beliefs of the applicant and, in that event, the applicant may petition the Board by letter requesting such special examination. If the Board allows such a special examination, it shall set a time and place thereof in its discretion.

(8) The Board may give an oral examination to operators in all classifications who fail the written examination upon written request. The Board will consider each written request for an oral examination on its individual merit and set the time and place the examination will be held. At the oral examination at least three (3) members of the Board must be present, one of which will hold a certificate of the same level or higher in the classification being examined.

(9) Examinations will not be returned to examinees, but will be on file for one year in the office where the business of the Board is conducted. An applicant may review his examination in the office.

(10) An operator failing the examination two times may not be issued a temporary certificate; however, he may take the examination whenever it is given upon re-applying and upon the approval of the Board.

(11) Duplicate certificates shall be provided by the Board to persons requesting the same upon the payment of a $2.00 fee. (History: Sec. 69-5910, R.C.M. 1947; NEW MAC Not. No. 16-3-34-1; Adp. 11/13/75; Eff. 12/5/75.)

Reprinted from Billings Gazette

PUMP-CHUTE SYSTEM DEODORIZES LAGOON

by Mrs. R. C. Hurd

GLENDIVE - An inexpensive aeration system apparently has solved Glendive's problems with odors from a sewage lagoon.

The lagoon was installed in West Glendive 10 years ago and plagued the area and parts of Glendive with foul odors, with seemingly no solution to the problem.

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AERATED IN CHUTE

Water pumped from Glendive's sewage lagoon is aerated by being tumbled down a wooden chute, removing odors and improving sewage treatment results. Watching the operation are Fran Mertes, consulting engineer, and Alf Hulteng of Billings, regional engineer with the State Department of Health.

Last winter, in a joint effort between the county commissioners, District Sanitarian John C. Geach, and a local pump manufacturer, an aeration system was installed which solved the odor problem.

THE CRISAFULLI PUMP CO. donated a 12-inch submersible pump with an electric motor. County commissioners built a wooden chute for the pump and temporary housing. A discharge hose was attached to the pump, and the pump was lowered into the lagoon. Water from the lagoon then is pumped into the aeration chute.

The aeration chute is 32 feet long and four feet wide. Air is mixed into the water as it tumbles over baffles in the chute.

Cost of the project was $7,500, if the cost of the pump were included, but in this case the pump was donated.

A CONSULTING ENGINEER for the pump company said the cost of the system is about one-tenth of the cost of comparable systems to accomplish the same degree of sewage treatment.

In addition, he said, the system is more complete because of the complete circulation of all the waters through the pump and chute.

The system was begun last February and monitored daily until June 1 and twice weekly since them. The sanitarian's office said dissolved oxygen levels of the pond have been kept at a high level, either by algae or by the aeration system or both.

THE SANITARIAN SAID there is absolutely no odor from the lagoon and there is more efficient sewage treatment. The effluent that discharges into the Yellowstone River does not rob the river of its oxygen needed to support fish and other life in the river, he said.

Don Gibson, Dawson county commissioner, says there have been no complaints of odors since the system has been installed, and that the system is being watched by many small towns around Glendive.

The county is considering replacing the wooden aeration chutes with concrete to make the system permanent, but no definite decision has been made.